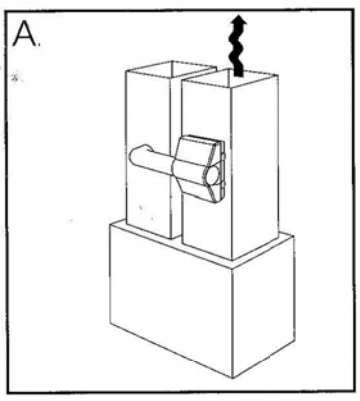
Model HFT2700 Installation Instructions and Mounting Template

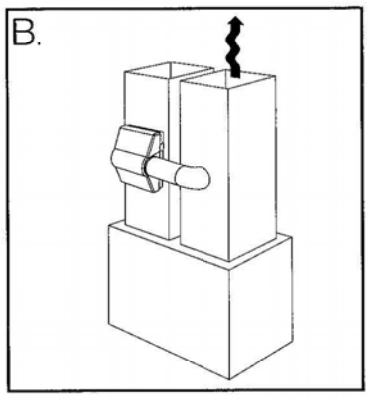
Bel-Aire
ElectronicAirCleaners.com

This product must be installed by a qualified heating and air conditioning contractor. Failure to do so could result in serious injury from electrical shock.

Installation Options

This humidifier should not be installed where temperatures could exceed 180° F.

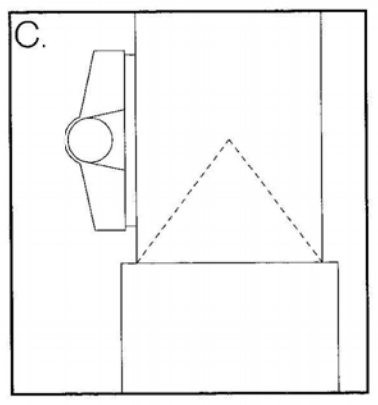




A. Mount the humidifier to the warm air plenum. Connect the unit to the cold air return using 6" round duct.

OR

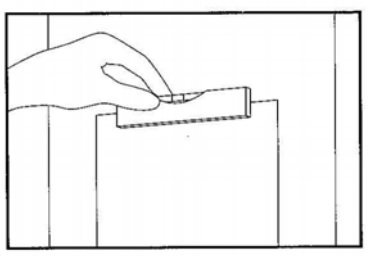
B. Mount the humidifier to the cold air return. Connect the unit to the warm air duct using 6" round duct.



C. The White-Rodgers Model HFT2700 should be installed as shown in relation to AC cooling coils.

Installation Instructions

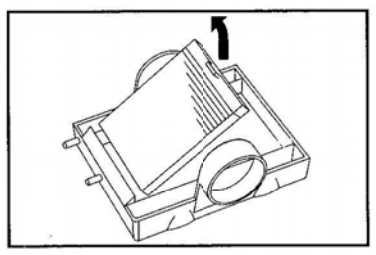
⚠ Caution Template Must Be Level



1. Tape the template onto the furnace plenum, **making sure it is level.**

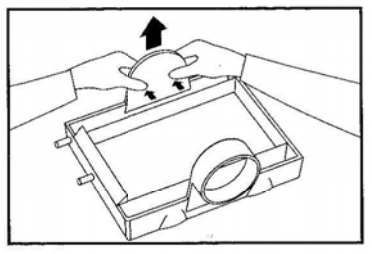
Trace the four sides onto the plenum.

Remove the template from the plenum. **Accurately cut the plenum opening.**

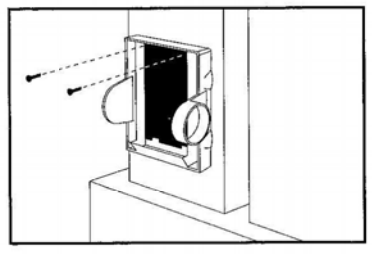


2. Disengage the humidifier cover from the mounting frame by rotating the thumb screw located at the bottom of the cover. Tilt and lift the cover off the frame.

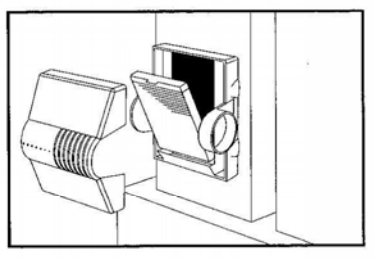
Pull out the drip tray and evaporator pad assembly by grasping the top lip and tipping out.



3. The humidifier is assembled for right side discharge. To convert from right to left side discharge, apply pressure to the inside of the side panel using both hands as the arrows indicate in the above illustration and lift out. Exchange the two side pieces and reinstall using moderate pressure.



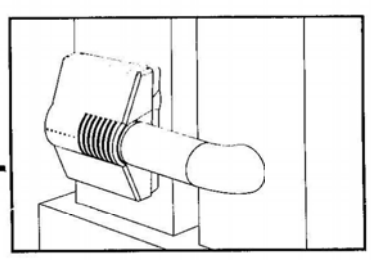
4. Place the mounting frame into the plenum opening so that the frame hooks over the bottom of the cut-out plenum opening. Screw the frame to the plenum with the screws provided.



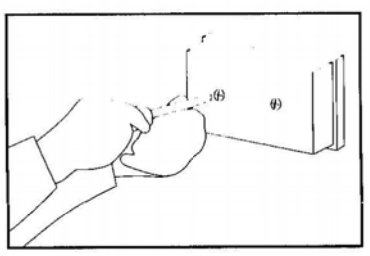
5. Reinstall the evaporator pad and drip tray.

Reattach the cover assembly by hooking it at the top of the mounting frame first, then securing with thumb screw at the bottom.

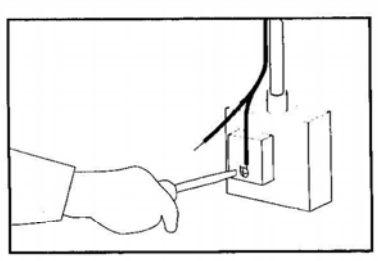
Use Outside Edge For Template Cutout



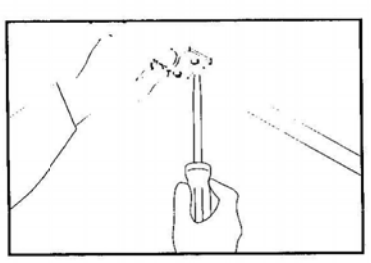
6. Install a 6" collar on the opposite plenum at the same height as the humidifier discharge collar. Slip on a 90° elbow and measure the length of 6" round duct required to make the connection. Attach the 6" duct to the discharge collar with the screws provided in the parts bag. If the furnace has central air conditioning, install the air shutter provided by placing it under one of the six mounting screws securing the by-pass collar.
NOTE: Flexible duct may be used.



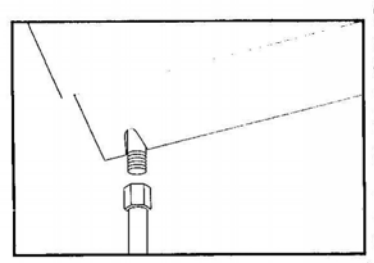
7. Locate and install the humidistat kit by following the detailed instructions found in the parts bag.



8. Shut off the furnace power and locate the blower motor junction box. Mount the 24 volt transformer on the box and tap the primary 120 volt leads to the motor wires. Wire the solenoid valve in series with the 24 volt terminals on the transformer and humidistat. See the wiring diagram in the lower left corner of the template.

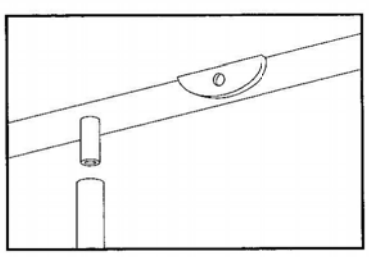


9. Tap into the water supply line using the saddle valve provided. Make sure to read directions on saddle valve bag.

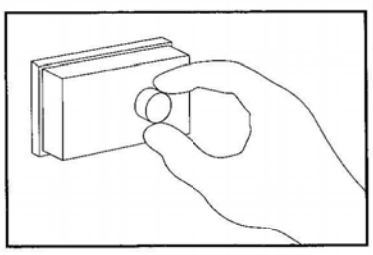


10. Connect copper tubing from the saddle valve to the solenoid valve. Check for leaks.

The saddle valve must be fully opened or closed. Do not use the valve to regulate water flow.



11. Attach a 1/2" I.D. vinyl hose and clamp to carry the flushing water from the unit to the drain. Be sure the drain hose has a constant pitch to the floor drain. **To avoid damage to the drain fitting, do not use solvent type adhesives when connecting the plastic hose to the humidifier.**



12. Test operation. Check for any water leaks. Be sure that humidistat is operating properly.

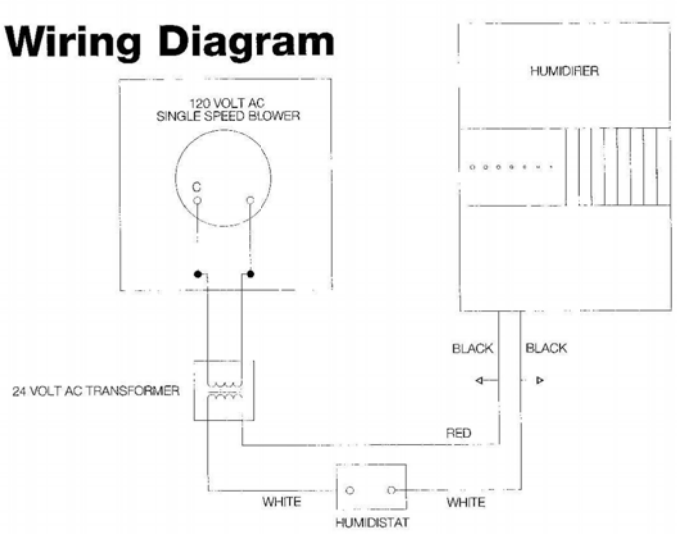
★ ★

★ **NOTE: For multi-speed blowers or systems not using 120 VAC, use the A-50 Electronic Relay.** ★

★ ★

⚠ Warning: Do Not install this unit where temperatures might exceed 180°F

Wiring Diagram



For multi-speed blowers or systems not using120 VAC, use the A-50 Electronic Relay.

⚠ Warning

1. 120 volts may cause serious injury from electrical shock. Disconnect electrical power to the furnace before starting the installation.
2. Sharp edges may cause serious injury. Use care when cutting plenum openings and handling ductwork.
3. Do not cut or drill into any air conditioning or electrical accessories during humidifier installation. Fatal electrocution is possible if you come into contact with a live electrical wire. Blindness can occur if freon contacts your eyes.

⚠ Caution

1. Do not install where freezing temperatures could occur.
2. Do not install the unit on a furnace jacket.
3. Do not install the unit on a plenum face where the blanked-off ends of the cooling coil restrict air movement through the humidifier.
4. Do not set humidity higher than recommended. Condensation damage may result.
5. Do not set humidity up to recommended levels if there is condensation on the inside windows of any living space. Condensation damage may result.
6. Do not install the unit on the supply plenum where static pressure exceeds 0.4" W.C.
7. Do not install the unit where water pressure exceeds 125 psi. Leakage may result. Follow codes in effect concerning pressure reduction.
8. The installation, wiring and plumbing of the humidifier must comply with local codes, ordinances and regulations.

WHITE-RODGERS
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HBP Part No. 000-0752-215 Rev 2/02

Use Outside Edge For Template Cutout

WIRING INSTRUCTIONS

⚠ CAUTION:

* **Use the wiring diagram shown for single-speed blower operation only.**
* ***When wiring multi-speed blower systems use an A50 relay or a fan sail switch to prevent premature component failure.***
* **Consult the instructions included with the humidifier and any additional controls for instructions on wiring.**
* **Fatal electrocution is possible if you contact a live wire.**
* **Electrical power can cause electrical shock.**
* **Disconnect all electrical power supplied to the equipment before beginning installation.**
* **All electrical wiring must comply with codes and ordinances.**

⚠ **Caution:** *When wiring a* ***Model HFT2900FP or a Steam Humidifier*** *Consult the Units wiring diagram. These Units Don't require an additional transformer.*

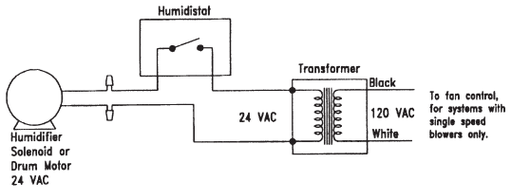

Figure 3: Wiring Diagram

OPERATIONS CHECK

1 Turn the heating system thermostat up and wait until the system blower activates.

2 Turn the humidistat clockwise to the on position; visually check humidifier for operation.

3 Turn the humidistat counterclockwise to 10% or lower; visually check to see that humidifier shuts off.
Note: The set point where the humidistat turns on and off may not represent the actual indoor relative humidity, due to storage and transport environments. Allow at least 24 hours for humidity control to adjust to the installation.

4 Turn the humidistat to the recommended setting for operation (see the recommended settings chart on page 1).

5 Turn the system thermostat back to normal operation.

⚠ **WARNING:** Adjusting the humidity control higher than the recommended setting may cause condensation resulting in possible damage to the home.

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HBP Rev. 10/02 PN/000-0756-312

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2271-100 HUMIDISTAT

Comfort plus™

The humidistat is designed for **either return air duct or wall mounting.** Packaged in a duct mount configuration, **(For this type mounting begin installation at the section labeled return air duct installation on page 2.)** for conversion to a wall mount configuration simply pull off the knob and remove the mounting screws and rotate the control 180° and reattach the mounting base, **(For this type mounting begin installation at the section labeled wall mount installation on page 3.).**

⚠ DANGER

* **Do not cut or drill into any air-conditioning or electrical accessories during installation.**
* **Fatal electrocution is possible if you contact a live wire.**
* **Electrical power can cause electrical shock.**
* **Disconnect all electrical power supplied to the equipment before beginning installation.**
* **Blindness can occur if freon contacts your eyes.**

⚠ CAUTION

* **Do not install on any electrical system over 30 VAC.**

⚠ CAUTION

* **All electrical wiring should comply with codes and ordinances.**

Recommended Settings

At Outside Temperatures		Recommended Setting
-20°F	-30°C	15% (Low)
-10°F	-25°C	20% (Low)
0°F	-20°C	25% (Med)
+10°F	-10°C	30% (Med)
+20°F	-5°C	35% (High)
Over 20°F	Over 0°C	40% (High)

⚠ WARNING:

Adjusting the humidity control higher than the recommended setting may cause condensation resulting in possible damage to the home.

RETURN AIR DUCT INSTALLATION

1 Locate the humidistat in the return air duct at least 12 in. up stream prior to the humidifier or the humidifier by-pass tube.
2 Remove the backing and adhere the humidistat mounting template in a horizontal position, make sure it is level.
3 Drill four 7/64 in. mounting holes.
4 Drill 1/2 in. hole in the center of the template and use tin snips to cut the rectangular hole designated by the dotted lines then remove template.
5 Remove the backing and adhere the gasket over the opening area.
6 Connect the low voltage wires to the humidistat terminals. Tuck the wire into the recessed area on the back of the base plate.
7 Use sheet metal screws to securely fasten the humidistat to the return air duct.

⚠ CAUTION:

* **Mount the humidistat in the return air duct only, installation on the warm air duct will destroy humidistat element.**
* **Make certain the wires stay in the slot under the mounting base.**

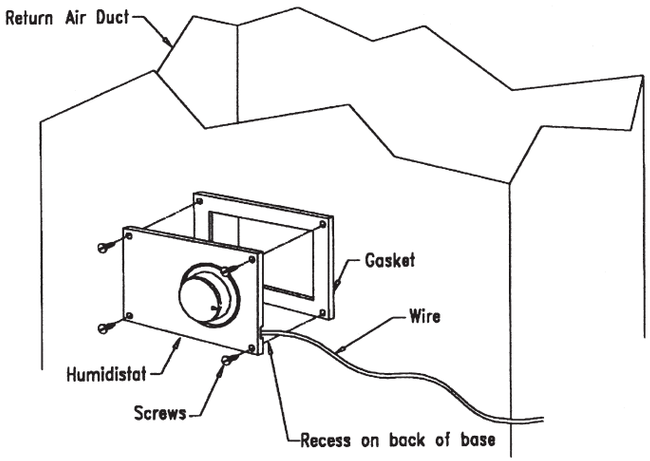

Figure 1: Wiring Diagram

WALL MOUNT INSTALLATION

1 Locate the humidistat about 5 ft. above the floor, on an inside wall, away from discharge registers. Also, avoid areas with extreme variation in relative humidity levels; i.e. bathrooms and kitchens. When wall mounting, homeowners usually prefer the humidistat mounted beside, or in the vicinity of the heating thermostat.
2 **For conversion to a wall mount configuration, simply pull the indicator knob off and remove the mounting screws, and rotate the control 180° and reattach the mounting base Fig 2.**
3 Drill a 3/8 in. hole in the indention on the mounting base plate.
4 Place the base assembly in the predetermined location on the wall, in a horizontal position, make sure it is level. Mark and drill a 3/8 in. hole in the wall.
5 Run low voltage wire to the location and pull about 6 in. of wire through the hole.
6 Plug the hole with nonflammable insulation to prevent drafts from affecting the humidistat operation.
7 Position the base assembly over the wire and pull the wire through the hole previously drilled in the plate.
8 Use four 1 in. screws to secure the mounting base plate to the wall.
9 Connect the wires to the terminals on the control.
10 Use one 3/8 in. screw to secure the humidistat cover.
11 Remove the backing and adhere the cover label to the recessed area on the front of the cover.
12 Push the indicator knob onto the control shaft.

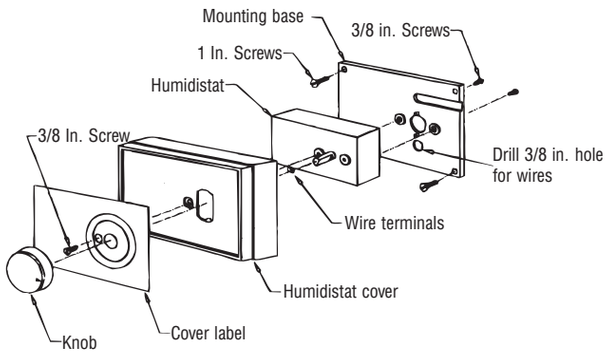

Figure 2: Wall Mounting Diagram